Landscape Dynamics Monitoring
in the Southern Plains Network

Importance / Issues

Landscape ecology focuses on patterns and processes at multiple spatial and temporal scales of the landscape mosaic. Landscape ecology is particularly important to grassland systems as they have evolved into a shifting mosaic as succession is continually reset by disturbances from fires, drought and grazing. Landscape ecology of SOPN parks is particularly important due to their small size. The ecological communities within SOPN parks are as influenced by the ecological processes and land use activities occurring outside of park boundaries as they are by management decisions within the park.

Capulin Volcano

Preliminary Monitoring Objective

1. Determine the state of the current landscape inside and adjacent to SOPN national parks.

2. Determine long-term trends in land-use change, habitat conversion to urban landscapes, creation of edge effects, reduction of functional ecosystem size, and elimination of important habitats within and adjacent to SOPN parks.

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Potential Measures

Landscape metrics such as area metrics, patch density and size metrics, edge, shape, core area, and nearest neighbor metrics. Spatial geostatistics analyses may include lacunarity and contagion.

Protocol Development & Status

SOPN's landscapes dynamics monitoring protocols will be based on existing protocol used by other Networks and agencies, but will be adapted as needed to suit the needs of our network. Tulia DeFex at Texas A&M University is leading this project. A portion of the landscape dynamics protocol was presented at the Natural Areas Conference. The planned completion date for the protocol is November 2007.

Contact Information

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